REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-10 are pending in this application, Claims 11-13 having been previously cancelled, and Claims 1, 9, and 10 having been amended by the present Amendment. Support for amended Claims 1, 9, and 10 can be found, for example, in the original claims, drawings, and specification as originally filed.[1] No new matter has been added.

In the outstanding Office Action, the claims were objected to due to informalities; and Claims 1-10 were rejected under 35 U.S.C. §102(b) as anticipated by Rai (EPO47956).

In response to the objection to Claim 1, Applicants have amended Claim 1 in accordance with the suggestion set forth in the outstanding Office Action. Accordingly, Applicants respectfully submit that the objection to Claim 1 has been overcome.

In response to the rejection of Claims 1-10 under 35 U.S.C. §102(b) as anticipated by Rai, Applicants respectfully submit that amended independent Claim 1 recites novel features clearly not taught nor rendered obvious by the applied reference.

Amended independent Claim 1 is directed to a digital image processing apparatus:

> ... once a first color correction process is performed on a pixel,
> each additional color correction process of said two or more
> color correction processes with respect to the pixel may not be
> performed based on previous color correction processes,
> inhibiting color mapping in respect of loci associated with the
> first color correction process.

An advantageous feature of Applicants' invention is the reduction in the occurrence of color artifacts when a succession of color correction processes are applied to an image, by inhibiting color mapping with respect to color space loci associated with previous color correction processes.

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[1] See page 2, lines 17-23; page 6, lines 8-21; and page 9, lines 5-23 of the specification; and original Claim 1.

Rai describes a color correction system which implements color manipulation in both a primary color domain and a hue domain. In particular, Rai describes a plurality of color correction blocks for manipulating the color of pixels within a video frame or an image region defined by an operation.[2] Each color correction block allows a colorist to define up to sixteen non-overlapping hue sectors which are also referred to as color correction channels.[3] The colorist may use different color correction channels to correct different parts of the image, for example, an image region within a geometric constraint and an image region outside the geometric constraint.[4] Furthermore, Rai describes that the color correction blocks may be arranged in parallel or series.[5]

However, Rai fails to teach or suggest that "once a first color correction process is performed on a pixel, each additional color correction process of said two or more color correction processes with respect to the pixel may not be performed based on previous color correction processes, inhibiting color mapping in respect of loci associated with the first color correction process," as recited in Applicants' amended independent Claim 1.

As mentioned above, Rai describes that the color correction blocks may be arranged in series.[6] However, Rai merely describes that the color correction applied to a pixel is dependent solely upon whether the pixel occurs within a color correction channel (e.g. hue sector) defined for that color correction block. If the pixel does lie within a color correction channel (e.g. hue sector) defined for that block, then color correction is applied to the pixel. On the other hand, if the pixel does not lie within the color correction channel defined for that block, then the pixel is unaltered by the color correction block.[7] Therefore, the output of each color correction block is dependent solely upon whether the input pixel is within a color

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[2] See Rai at column 9, lines 44-47, and column 10, lines 50-54.
[3] See Rai at column 10, lines 47-50.
[4] See Rai at column 15, lines 31-40 and column 26, lines 22-27.
[5] See Rai at column 9, lines 39-42; column 35, lines 37-40; and Figure 11.
[6] See Rai at column 9, lines 39-42.
[7] See Rai at column 36, lines 24-38.

correction channel defined for that correction block. In other words, in <u>Rai</u>, color correction applied by a current block *is independent from the color correction applied by a previous block*.

In contrast, in Applicants' amended independent Claim 1, color mapping *in respect of loci associated with the first color correction process is inhibited*. By inhibiting color mapping in respect of the loci associated with the first color correction process, the claimed invention provides a technique for alleviating a problem that arises when a succession of color correction processes are applied to an image, in which subjectively undesirable results may arise.[8] In other words, Applicants' color correction logic recited in independent Claim 1 may help prevent a position in color space that has previously been modified by an earlier color correction process from being modified again.

Page 7 of the August 3, 2007 Official Action asserted that applying alpha mixing applied by one color correction block is the same as Applicants' inhibiting color mapping in respect of color space loci associated with previous color correction processes. However, the alpha mixing described in <u>Rai</u> is not the same as Applicants' claimed "inhibiting color mapping in respect of loci associated with the first color correction process." In <u>Rai</u>, alpha mixing is applied as part of the color correction process carried out by a color correction block,[9] while in Applicants' Claim 1 the color correction process inhibits "*color mapping in respect of said lock associated with the first color correction process*...." Therefore, in Applicants' Claim 1, whether color mapping is applied is *dependent upon whether a pixel has previously been modified by a previous color correction process*. This is neither taught nor suggested by <u>Rai</u>.

In <u>Rai</u>, a color correction process may be applied to a pixel by a first color correction block if the pixel is within a color correction channel defined for that block. The output of

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[8] See, for example, page 2, lines 18-24 of the specification.
[9] See <u>Rai</u> at column 36, lines 28-38, and column 37, lines 20-50.

the first block may then be passed to a second color correction block if the blocks are arranged in series. However, the second color correction block will merely detect whether the pixel is within one or more color correction channels defined for the second color correction block. Therefore, a pixel that has previously been color corrected by the first block may, if it is within a color correction channel defined for the second block, also be color corrected by the second block. Thus, the color correction process of Rai may introduce color artifacts into portions of video images that have previously been color corrected, if the color correction channels for different color correction blocks overlap. Further Rai does not address the problem of how to reduce color artifacts in portions of images *that have previously been color corrected*. In fact, Rai may even introduce color artifacts in this scenario. Therefore, Rai teaches away from Applicants' claimed invention.

Accordingly, Applicants respectfully submit that amended independent Claim 1 (and all claims depending thereon) patentably distinguishes over Rai.

Amended independent Claims 9 and 10 recite "inhibiting color mapping in respect of loci associated with a first color correction process, by possibly not performing each additional color correction process of said two or more color correction processes on a pixel, after said first color correction process is performed on the pixel, based on previous color correction processes." Thus, Claims 9 and 10 are believed to be patentable for at least the reasons discussed above.

Accordingly, Applicants respectfully request the rejection of Claims 1-10 under 35 U.S.C. §102(b) be withdrawn.

Consequently, in view of the present amendment, and in light of the above discussion,

the pending claims as presented herewith are believed to be in condition for formal

allowance, and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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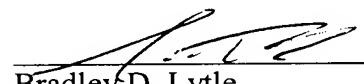
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